

Found in abundance only at the foot of talus slopes near Cliff, and on a rocky shore near Bête Gris, Keweenaw County, September, 1935.

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IRREGULARITIES IN THE FLORAL PARTS OF  
TRADESCANTIA OZARKANA

CORA SHOOP

ON April 19, 1929 one plant of *Tradescantia ozarkana* Anderson & Woodson with white flowers was taken from the colony near Roaring River, the typical locality of the species, and planted in a window box at Monett, Missouri. The following spring the box was placed on the ground in partial shade at Steelville. An irregularity in the number of petals was noted each of the two following years, but no record was kept. In September, 1933 the plants were transplanted to the ground where they could receive only morning sunshine. Doubling continued. In the fall of 1933 the plant was moved to a position where it received only western sunshine. The original plant by the spring of 1935, when the following record was begun, numbered fifteen many-branched stalks.

Irregularities occurred on any stalk, both young and old, on axillary as well as on terminal umbels. The individual parts of irregular flowers were normal in size and appearance. No observations in the field have been made of irregularities in the species; casual observation in 1929 and in 1935 did not reveal any digressions in floral parts.

No irregularities occurred in *Tradescantia virginiana* L. which was collected at Sarcoxie, Missouri the same spring and cultivated with the plants of *T. ozarkana*; also *Tradescantia subaspera* Ker-Gawl. transplanted to the same garden continued to display the normal number of floral parts.

Mature capsules developed on irregular flowers as readily as on normal, but in no capsule were more than six seeds matured.

The plants continued in full bloom with about the same ratio of normal to abnormal flowers until the stalks were destroyed by water June, 1935.

Flowering records for the spring of 1935 are summarized in TABLE I.

TABLE I. Flowering record of *TRADESCANTIA OZARKANA* for spring 1935.

Number of flowers examined.....	904
“ “ irregular flowers.....	109
“ “ flowers with petals of same number as sepals.....	65
“ “ “ “ fewer petals than sepals.....	14
“ “ “ “ more “ “ “ .....	40
“ “ “ “ stamens twice as many as petals.....	75
“ “ “ “ “ one less than twice number of petals...	25
“ “ “ “ “ more than twice the number of petals..	3
“ “ “ “ two petals and two sepals.....	3
“ “ “ “ “ sepals and three or more petals.....	14
“ “ “ “ three or more sepals.....	68
“ “ “ “ ratio of 4-4-8 (Table II).....	48

TABLE II. Daily record of abnormal as compared with normal flowers; (x ?) represents the number of flowers in which the ratio at the left occurs.

Date	Number of normal flowers	Number of abnormal flowers	Number of petals	Number of sepals	Number of stamens
May					
1	6	3	4	2	8
			4	4	8
			4	4	7
2	8	2	4	4	8
			6	6	12
3	12	3	4	4	8 (x 2)
			4	3	7
4	17	8	4	4	8 (x 8)
5	12	3	4	4	8
			5	5	10
			6	4	12
24	40	1	4	4	8
25	27	5	4	4	8 (x 4)
			4	3	7
26	24	3	4	4	8
			4	3	8
			4	2	7
27	18	1	4	4	8
28	21	3	4	4	8
			4	3	7
			3	2	6
			4	4	8
			4	4	7
29	19	6	4	4	9
			4	3	6
			4	2	7
			3	2	6
30	23	1	4	2	7
31	29	3	4	4	8
			4	3	8
			2	2	6
June					
1	34	9	4	4	8 (x 2)
			4	4	7 (x 2)
			4	3	7
			4	2	7

TABLE II.—*Continued*

Date	Number of normal flowers	Number of abnormal flowers	Number of petals	Number of sepals	Number of stamens
June					
			4	2	5
			2	2	4
			5	5	10
			4	4	8 (x 3)
			4	3	8 (x 2)
			4	3	7
2	27	8	3	2	6
			5	5	11
			4	4	8 (x 5)
			4	3	7
			4	3	8
3	20	10	4	2	7
			2	2	4
			5	5	10
			4	4	8 (x 6)
			4	3	8 (x 2)
4	35	14	4	3	7 (x 2)
			4	2	7
			4	4	6
			5	5	10
			4	4	8 (x 3)
5	48	5	4	3	8
			4	3	7
			4	4	8 (x 3)
6	33	5	4	4	7
			4	3	7
7	31	2	4	4	8
			4	3	8
8	39	2	4	4	8
			4	3	8
9	31	3	4	3	6
			4	3	7
			4	3	8
10	40	3	4	4	6
			4	3	7 (x 2)
11	28	0			
12	28	1	4	4	8
13	36	0			
14	30	2	4	3	3
			4	3	7
15	44	2	4	4	8
			4	4	7
16	37	1	4	4	8

Observations of the same plant (*Tradescantia ozarkana* reported for 1935) were made again in May and June of 1936. This year the behavior was even more erratic. The first two flowers, opened May 1,

were irregular as were the three which opened the following day. On the third day there were six flowers with a ratio of 1 normal to 1.5 abnormal. The number of normal then increased over abnormal until May 11 when the ratio was 11 normal to 1 abnormal. From May 12 the number of normal flowers decreased until May 18 when the ratio was 1.3 normal to 1 abnormal. Following this period of steady and very marked decrease, there occurred a period of ten days with only slight variations between 1.3 and 1.9 normal to 1 abnormal. After May 29, the normals began a steady and rapid gain and continued up to a ratio of 13 to 1 by June 9.

The greatest number of flowers produced on any one day was 66 on May 27, with 37 normal and 29 abnormal. The petals ranged in number from 2 to 8 inclusive, the sepals from 2 to 6, and the stamens from 5 to 14. Combinations of 4 petals, 4 sepals, and 8 stamens occurred 50 times. The 4-3-8-combination occurred 28 times, and the 4-4-7 occurred 18 times. Some less frequent, but higher combinations were: 5-5-10; 6-6-12; 6-5-13; 7-5-14; 8-3-12; and 8-4-11.

From May 1 to June 9, the plant produced 965 flowers with a ratio of 2.23 normal to 1 abnormal for May; and of 10.6 to 1 for June.

The plant was not cultivated. Seedlings from the 4-4-8-combinations were established this spring, but will not flower until next spring, if then.

STEELVILLE, MISSOURI.

## THE CORRECT NAME OF THE LEAFY SPURGE<sup>1</sup>

C. V. MORTON

THE weed known as leafy spurge, of some importance in recent years, has in the United States always been known as *Euphorbia Esula* L.<sup>2</sup> However, in the 1928 Report of the Division of Botany, Department of Agriculture, Dominion of Canada, p. 15, occurs the following statement:

During 1928 the known distribution in the western provinces of a spurge, *Euphorbia virgata* (which has passed in the east as *E. Esula*), has been extended by a number of specimens received.

In October, 1931, Dr. M. O. Malte wrote to Dr. Herbert Groh as follows:

<sup>1</sup> Published by permission of the Secretary of the Smithsonian Institution.

<sup>2</sup> J. B. Norton, Ann. Rep. Mo. Bot. Gard. 11: 85. 1900. Gray's Manual, ed. 7, 549. 1908. Britt. & Brown, Ill. Flora ed. 2, 2: 473. 1913. Rydberg, Flora of the Plains, 519. 1932. Muenscher, RHODORA 32: 100. 1930, and Cornell Extension Bull. 192. 1930.